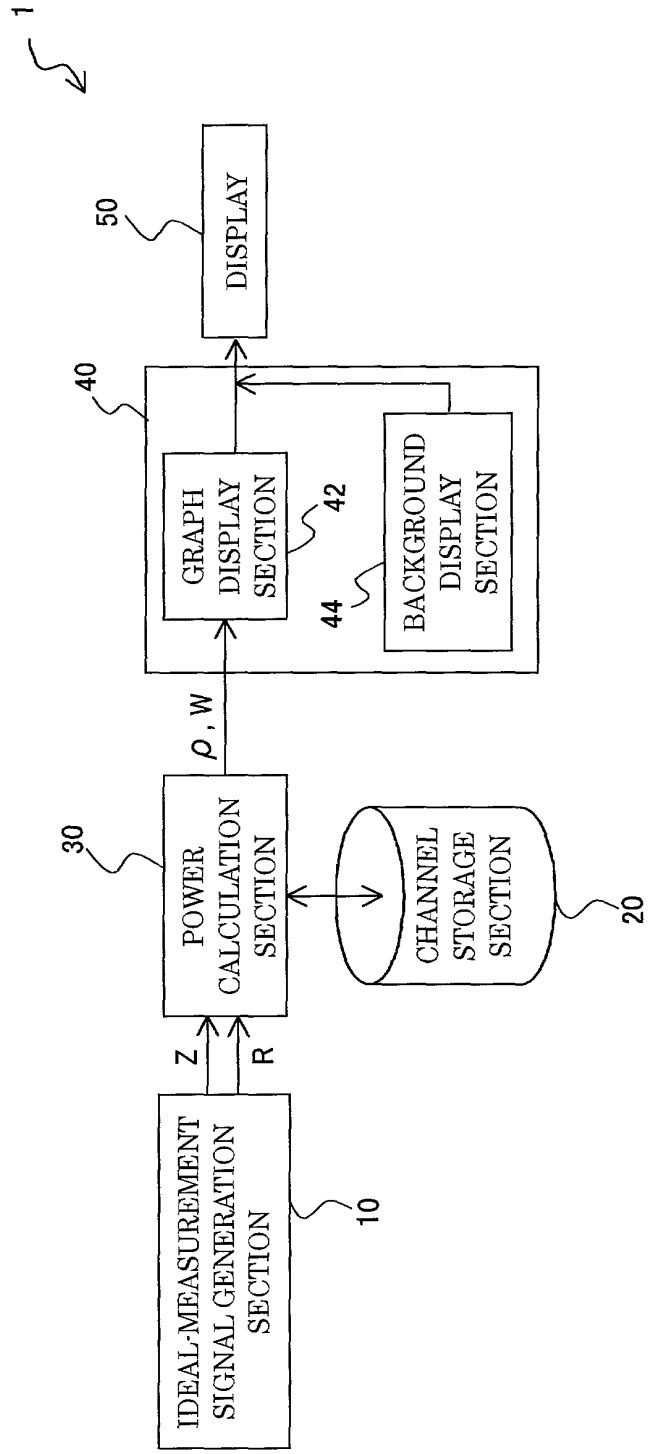
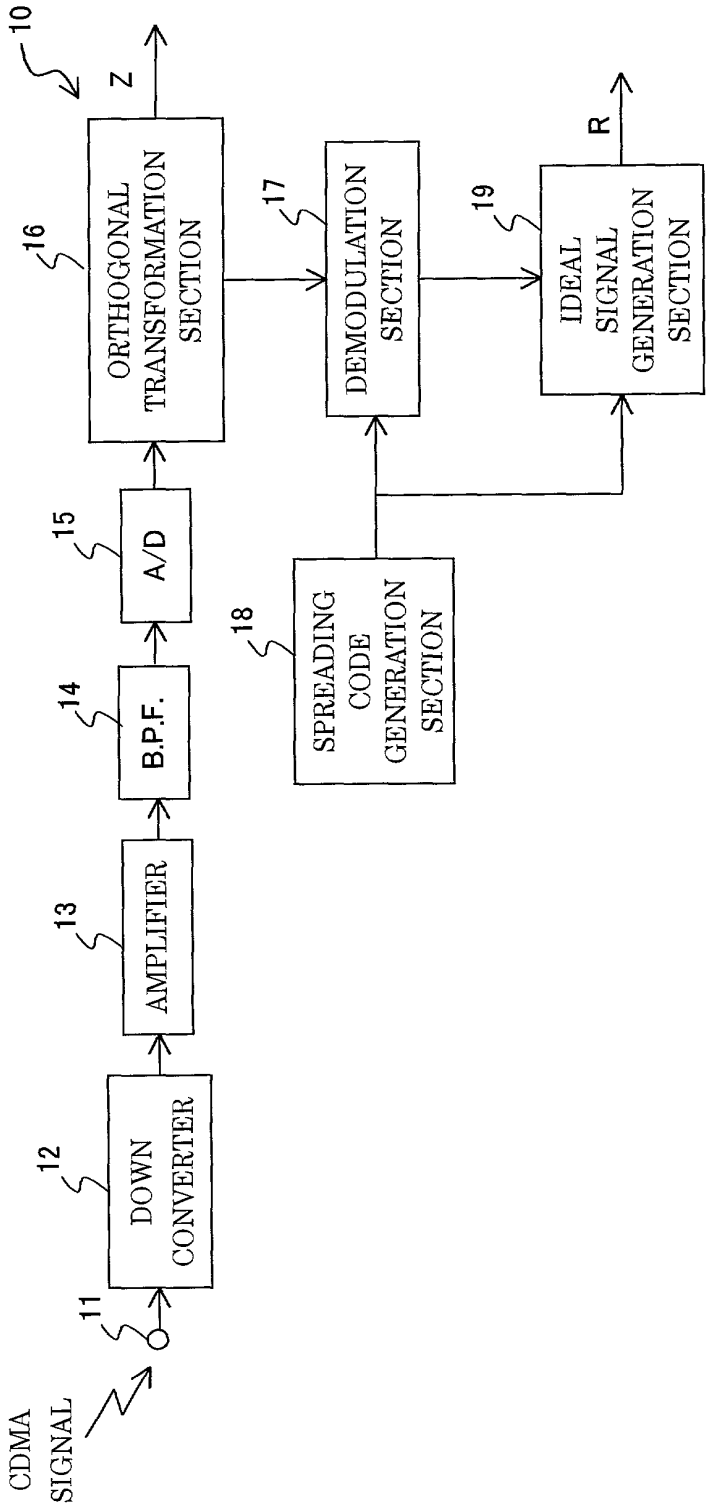


FADT0116Fig.1

TITLE: PHYSICAL QUANTITY DISPLAY DEVICE FOR DISPLAYING PHYSICAL QUANTITY OF MULTIPLE SIGNALS, METHOD AND RECORDING MEDIUM
Inventor: Toshiaki KURIHARA et al.
Docket No. 4468-021



FADT0116Fig.2

20

DISPLAY OBJECT

CHANNEL TYPE	SPREADING CODE LENGTH	SPREADING CODE NUMBER
PICH	32	0
DCCH	16	8
SCH2	4 (8)	2 (6)
FCH	16	4
SCH1	2 (4)	1 (2)

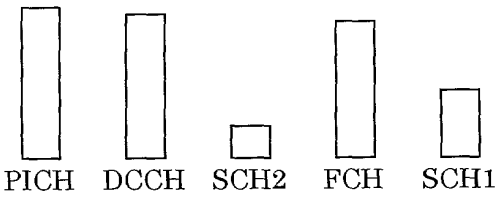
(a) $$\rho_i = \frac{\sum_{j=1}^{N} \left| \sum_{k=1}^{L} Z_{j,k} R_{i,j,k}^{*} \right|^2}{\left\{ \sum_{k=1}^{L} \left| R_{i,j,k} \right|^2 \right\} \left\{ \sum_{j=1}^{N} \sum_{k=1}^{L} \left| Z_{j,k} \right|^2 \right\}}$$

(b) $W_i = 10.0 \times \log_{10} \rho_i$ [dB]

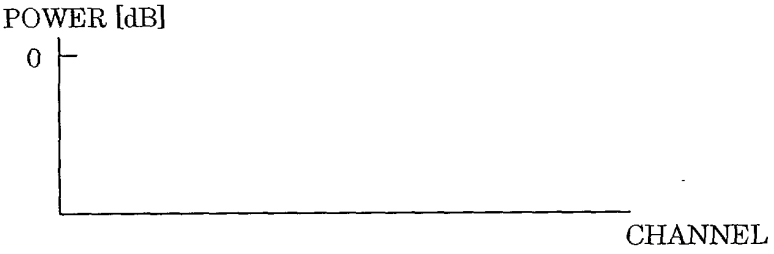
(c) X_i[dBm] = POWER VALUE OF INPUT SIGNAL [dBm] + W_i [dB]

CHANNEL TYPE	POWER [dB]
PICH	−3
DCCH	−6
SCH2	−40
FCH	−6.5
SCH1	−30

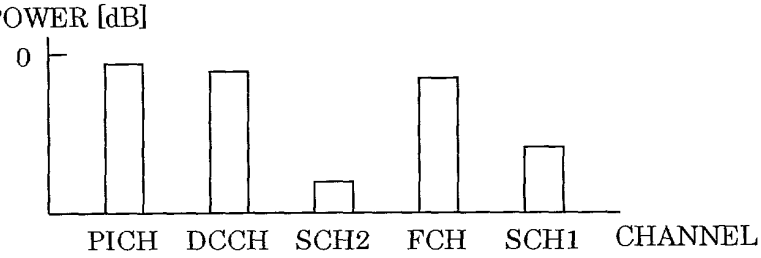
(a)

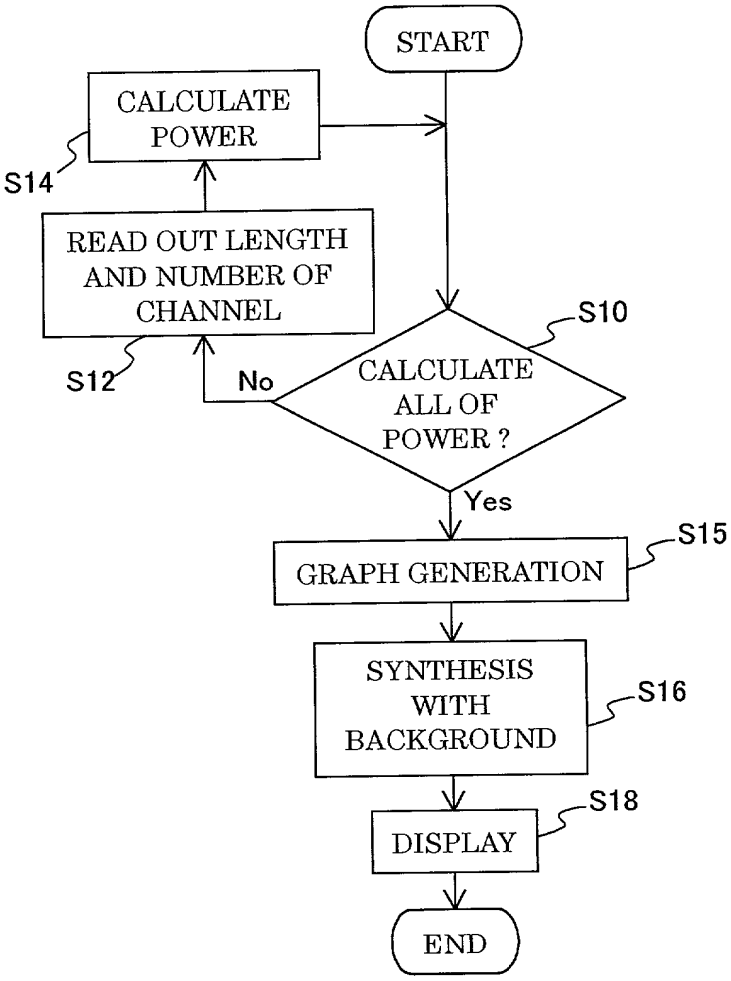

PICH
DCCH
SCH2
FCH
SCH1

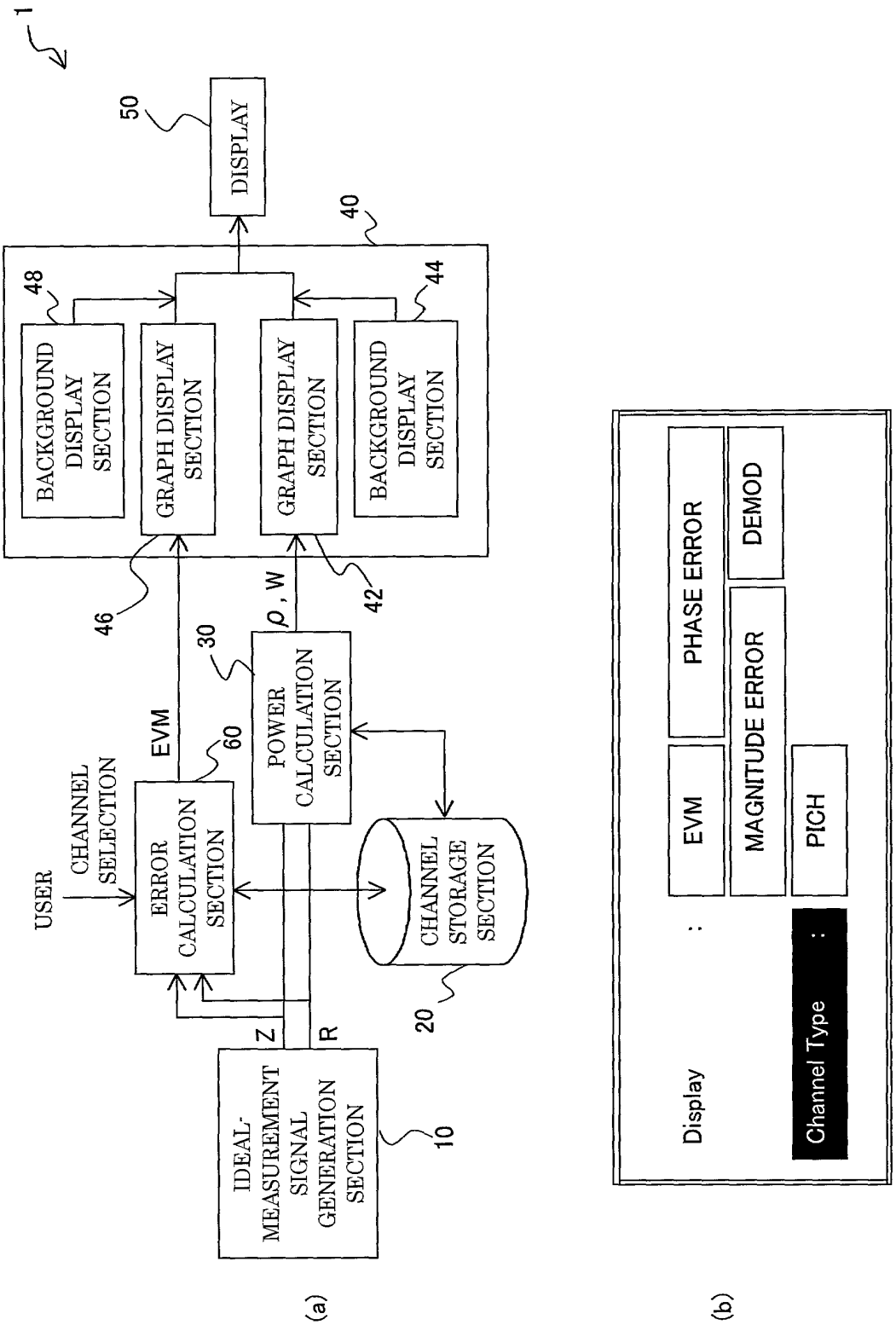
(b)


POWER [dB]
0
CHANNEL

(c)


POWER [dB]
0
PICH
DCCH
SCH2
FCH
SCH1
CHANNEL


START
CALCULATE POWER
S14
READ OUT LENGTH AND NUMBER OF CHANNEL
S12
No
S10
CALCULATE ALL OF POWER ?
Yes
S15
GRAPH GENERATION
SYNTHESIS WITH BACKGROUND
S16
S18
DISPLAY
END


1
50
DISPLAY
40
48
BACKGROUND DISPLAY SECTION
GRAPH DISPLAY SECTION
GRAPH DISPLAY SECTION
44
BACKGROUND DISPLAY SECTION
46
42
30
ρ , W
POWER CALCULATION SECTION
EVM
60
CHANNEL SELECTION
USER
ERROR CALCULATION SECTION
CHANNEL STORAGE SECTION
20
Z
R
IDEAL-MEASUREMENT SIGNAL GENERATION SECTION
10
(a)
Display
:
EVM
PHASE ERROR
DEMOD
MAGNITUDE ERROR
PICH
Channel Type
:
(b)

(a) $$EVMij = 100 \times \sqrt{\frac{\left| \left(\sum_{k=1}^{L} Z_{j,k} \cdot R_{i,j,k}^{*}\right) - \left(\sum_{k=1}^{L} R_{i,j,k} \cdot R_{i,j,k}^{*}\right) \right|^{2}}{\left| \left(\sum_{k=1}^{L} R_{i,j,k} \cdot R_{i,j,k}^{*}\right) \right|^{2}}} \quad [\%]$$

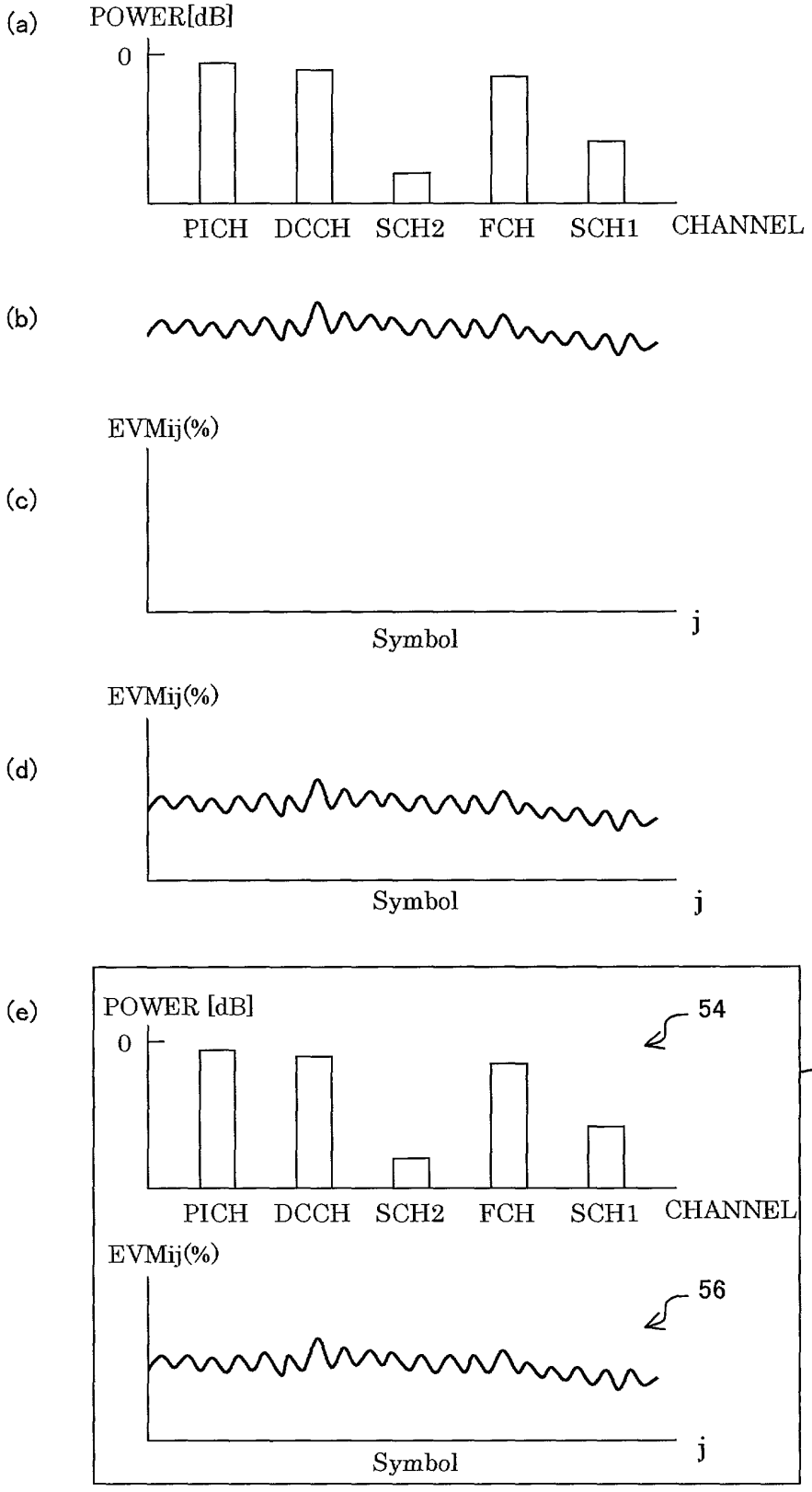
(b) Phase Error ij

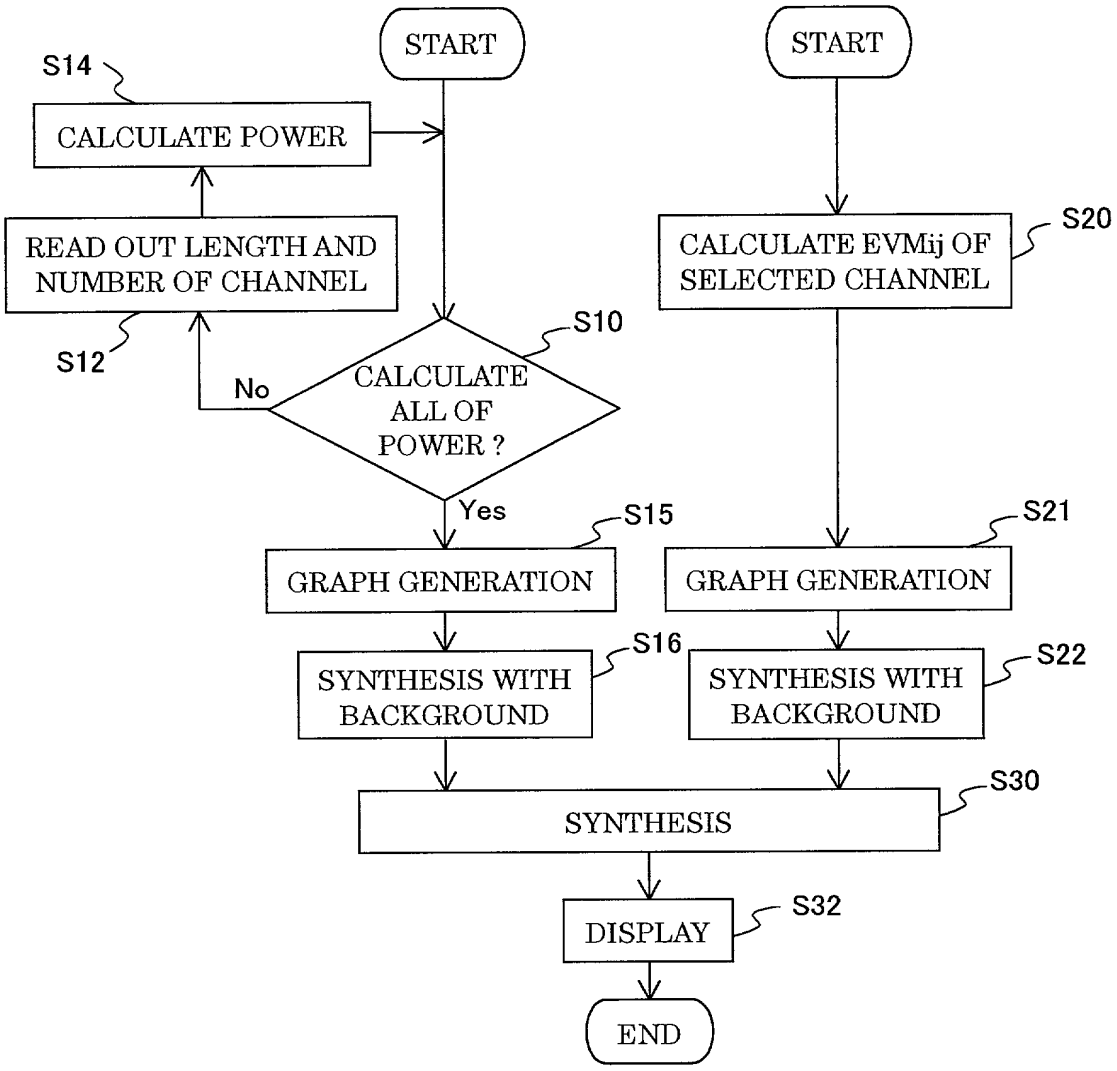
$$= \mathrm{Arg}\left(\sum_{k=1}^{L} Z_{j,k} \cdot R_{i,j,k}^{*}\right) - \mathrm{Arg}\left(\sum_{k=1}^{L} R_{i,j,k} \cdot R_{i,j,k}^{*}\right) \text{ [degree] OR [radian]}$$

PROVIDED THAT Arg IS $\tan^{-1}\frac{\beta}{\alpha}$ WHEN WITHIN ( ) IS TAKEN TO BE $\alpha + j\beta$.

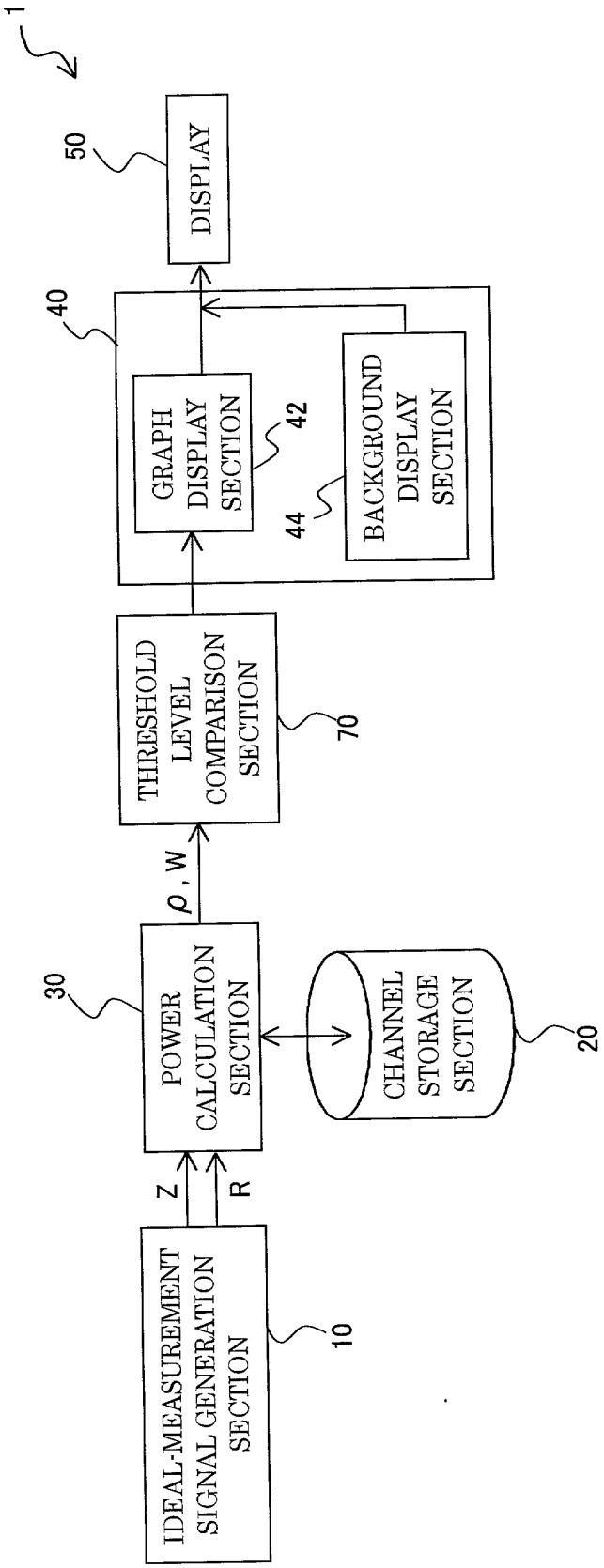
(c) Magnitude Error ij

$$= 100 \times \frac{\left| \sum_{k=1}^{L} Z_{j,k} \cdot R_{i,j,k}^{*} \right| - \left| \sum_{k=1}^{L} R_{i,j,k} \cdot R_{i,j,k}^{*} \right|}{\left| \sum_{k=1}^{L} R_{i,j,k} \cdot R_{i,j,k}^{*} \right|} \quad [\%]$$


(a)
POWER[dB]
0
PICH
DCCH
SCH2
FCH
SCH1
CHANNEL
(b)
(c)
EVMij(%)
Symbol
j
(d)
EVMij(%)
Symbol
j
(e)
POWER [dB]
0
54
52
PICH
DCCH
SCH2
FCH
SCH1
CHANNEL
EVMij(%)
56
Symbol
j



FADT0116Fig.11



FADT0116Fig.12

TITLE: PHYSICAL QUANTITY DISPLAY DEVICE FOR DISPLAYING PHYSICAL QUANTITY OF MULTIPLE SIGNALS, METHOD AND RECORDING MEDIUM
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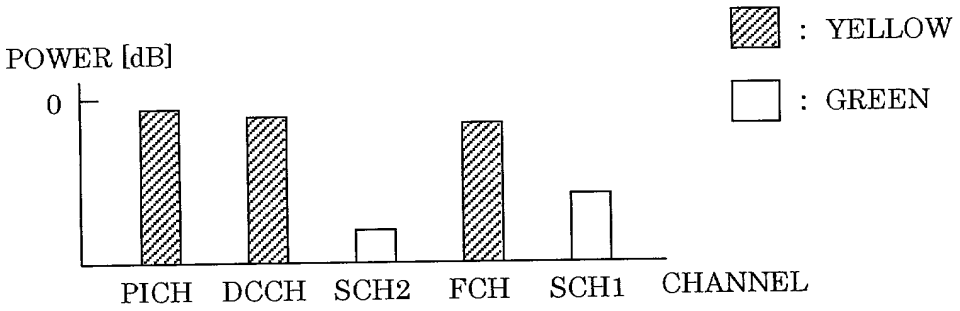

FADT0116Fig.13

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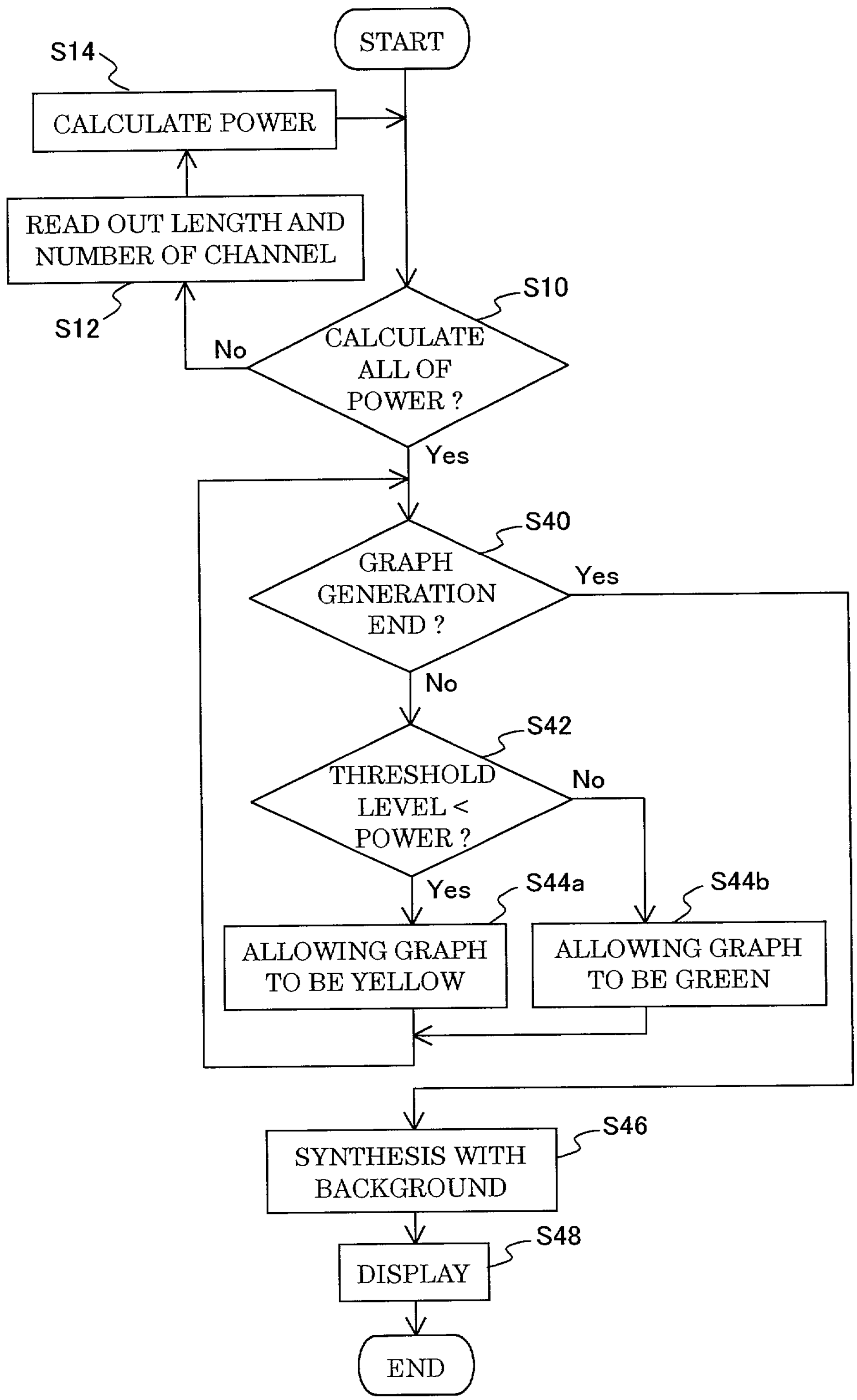
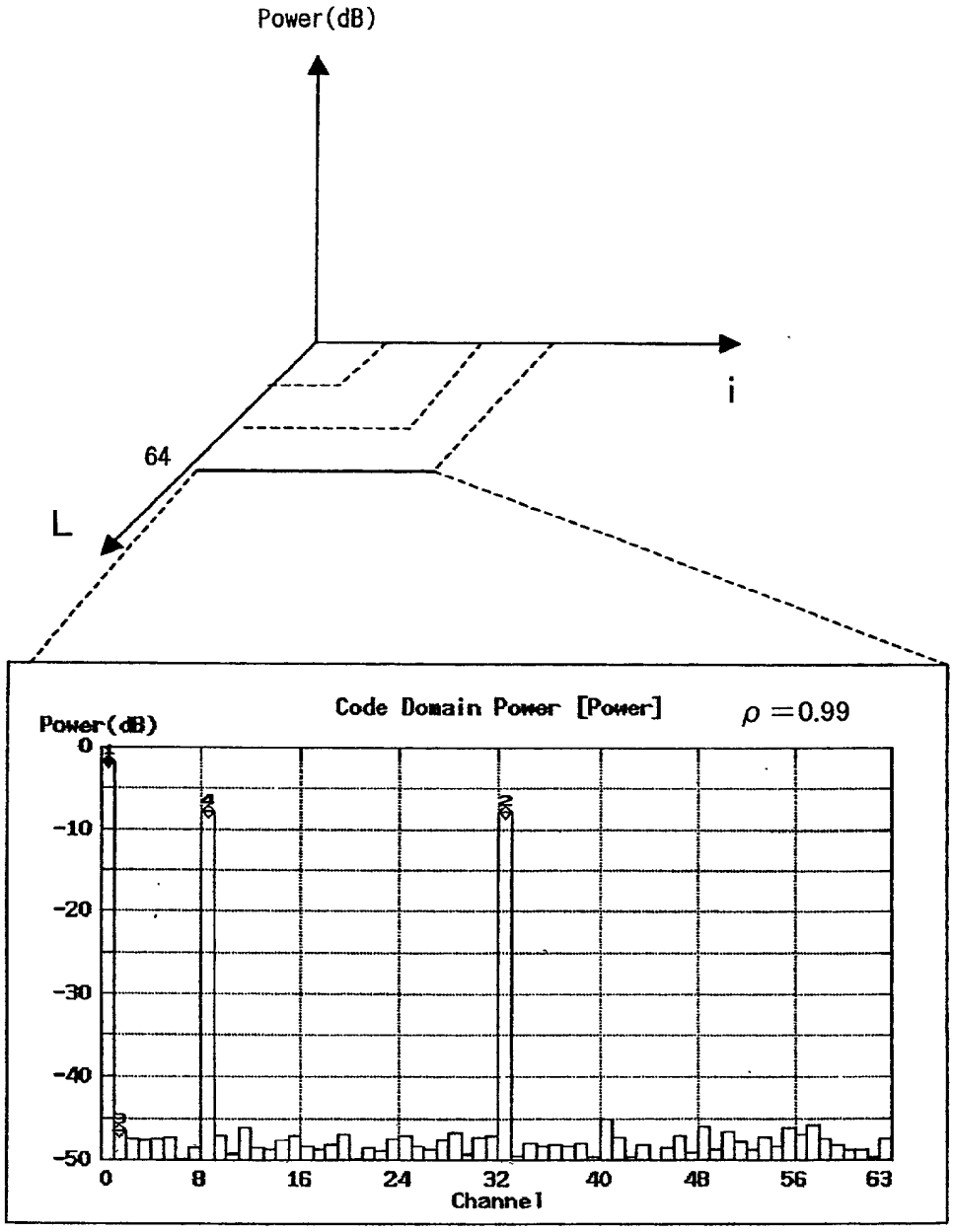


FADT0116Fig.14

LENGTH OF WALSH FUNCTION L=4

CHANNEL(i)	WALSH CODE			
0	0	0	0	0
1	0	1	0	1
2	0	0	1	1
3	0	1	1	0

FADT0116 Fig.15



FADT0116 Fig.16